

UNIVERSITY OF QUEENSLAND

Prentice Computer Centre

NEWSLETTER

authorization: Director of the Computer Centre

1 CHANGE OF NAME

It is with considerable pleasure that we report that Senate at its meeting of 27 February resolved that the University Computer Centre be named the 'Prentice Computer Centre' in honour of Professor S.A. Prentice.

Professor Prentice, as Head of the Department of Electrical Engineering, guided the early development of computing on the campus. In 1959, he chaired the first meeting to establish a major computer facility at the University. From his personal efforts, finance was pledged from numbers of organizations in the community and by 1962 the first large scale digital computer in Queensland (a GE-225) was operational at the University. Many Queenslanders now in prominent positions in computing owe much to the training they received on this computer. A number of industrial organizations, State Government departments and instrumentalities were able to commence the use of a computer at a much earlier stage. This in itself was a notable contribution to the development of the new technology in the State of Queensland.

By 1967, Professor Prentice recognized a replacement for the GE-225 must be provided. Again he organized finance and he had the foresight to support his advisers in choosing a communications based timesharing computer system. This provided the University and its external clients with the most up-to-date of technology. Indeed, it says a great deal that the initial configuration installed in 1968 has been capable of expansion to meet a load growing at excess of 30% per annum.

Now there are 80 terminals connected to the system serving practically every academic department as well as a number of State Government departments - and the technology is still current and in many ways in advance of alternative offerings. Thus, Professor Prentice, by his organizing ability, technical foresight and a strong belief in the destiny of computers in teaching, research, government and industry, has claim more than any other to be regarded as the father of computing in Queensland.

The Director and Staff of the Centre congratulate Professor Prentice on the award of this Honour Name by the University Senate.

## 2 COMMERCE BUILDING

Another pleasing development is that with the kind co-operation of the Faculty of Commerce & Economics, we are able to establish facilities in the new Commerce Building - Room 220. This should prove of great benefit to all Social Science Departments within the precinct. Our support staff for statistical packages is now located in the area. Progressively, it is proposed to establish public terminals, a card punch, a viewer for microfiche of the program library and other general facilities for Users.

By the end of 1975 a remote batch station will be installed allowing batch jobs for the PDP-10 to be accepted and results printed at the Commerce Building. It is also proposed to run the mini-computer offline to process small student jobs. Another proposal is to install an OPSCAN Optical Mark Page Reader in the area.

## 3 CONSULTING ON PROGRAMMING AND SYSTEMS DIFFICULTIES

The Centre provides consultation on programming and systems problems to University staff members, post-graduate students and external clients.

Our current practice of scheduling a duty programmer between the hours of 9 a.m. and 5 p.m. Monday to Friday has been reviewed. With the large range of services we now provide, it is not possible for any one of our programmers to be expert in all areas. For this reason, we propose that from the 17 MARCH the following consulting schedules will apply:

<u>STATISTICAL PACKAGES</u>	- COMMERCE BUILDING - ROOM 221 9 a.m. to 10 a.m. and 1.30 p.m. to 2.30 p.m.
<u>GRAPHICS</u>	- CENTRE foyer 9 a.m. to 10 a.m.
<u>OPERATIONS AND ACCOUNTING-</u>	ENQUIRY WINDOW 9 a.m. to 5 p.m.

SYSTEMS SOFTWARE PROGRAM  
LANGUAGES AND OTHER

- CENTRE foyer  
2 p.m. to 5 p.m.

\* EVENING SERVICE (All Areas) - CENTRE foyer  
5 p.m. to 9 p.m. TUESDAYS and  
THURSDAYS

\* This new evening service has been implemented as a trial. Its continuation and extension will depend upon demand.

A consulting service will also be provided at Griffith University initially for two hours weekly. The time and location will be determined shortly and advertised.

The Centre does not provide consultations to Undergraduate students. Students should refer problems to their Academic Supervisors. We would particularly seek the co-operation of Academic staff requesting that they do not refer students to us. We would of course be pleased to provide assistance to staff members in relation to a student problem.

Users will appreciate also that this service is to handle the more immediate problems. If more than an hour of effort is required, the Centre may levy a charge at the approved rates.

Often the situation occurs when a user collects his output, finds there is a problem and without any attempt to locate the error immediately requests assistance. It is not the purpose of this service to write users programs for them. We will do this, but at a charge. Please try first to locate your own 'bugs'. In the nature of things, you will find a duty programmer more helpful if you can demonstrate that you have made some attempt to research your own problem.

A Problem Specification form must be completed before any advice is provided. If the problem is non-urgent or a duty-programmer is not available, please lodge the Problem Specification form at the enquiry window at the Centre or in the tray provided in Room 220 in the Commerce Building.

#### 4 NEW MAPPING PROGRAMS

The Centre recently acquired the CALFORM, SYMAP and SYMVU programs from the Laboratory for Computer Graphics and Spatial Analysis at Harvard University. Since these programs were not written for the PDP-10, some conversion work is required. This conversion work has been completed in the case of CALFORM and it is anticipated that the remaining two programs will be ready for use in the near future. Manuals are currently available for inspection by users at the Centre and copies should be on sale within the next couple of weeks.

##### 4.1 CALFORM Program

CALFORM produces maps of spatially variable data using a pen plotter. The resulting maps contain shading symbolism which represents the data values attributed to data zones such as census tracts, municipalities, observation areas etc. CALFORM produces two basic types of maps - outline maps and conformant (or chloropleth) maps. A conformant map is best suited for data describing a bounded region. The entire region is given the same numeric value and is symbolised on the map according to the range of values in which its value falls.

Thus CALFORM would be suitable for plotting, e.g. average monthly household electricity consumption on a local authority basis for S.E. Qld. Either outline or conformant map may contain up to 500 data zones each described by a polygon of up to 600 vertices. Maps may contain up to 10 levels of shading.

It should be noted that CALFORM as implemented at UQ differs from the program described in the manual in the following areas:

- 4.1.1 All data input for the program is expected from a file CALFOR.DAT on Fortran Logical Unit 1. If this file is not present on the user's directory, FOROTS (the Fortran run-time system) will allow the user to change the file specifications for this data file. A warning message will be typed first e.g.

%FRSOPN File was not found

Unit=1 DSK:CALFOR.DAT[60,126] /ACCESS=SEQIN/MODE=ASCII

Enter new file specs. END with an \$(ALT)

\*

At this stage FOROTS is waiting for the user to specify the file to be used for data input. The response should be a standard PDP-10 file specification, E.G. DATA.DAT[161,1004] if the data file is DATA.DAT on directory [161,1004] or TTY: if the data is to read from the user's terminal.

- 4.1.2 The program log is written to the line printer on Fortran Logical Unit 3. Should the user desire this verbose output to be printed on his terminal, the monitor command "ASSIGN TTY:3" should be issued before running the program.
- 4.1.3 Plotter output is for plotting on PLT0: (the 11" Calcomp-565 plotter). The file may be reformatted for plotting on PLT1: (the 36" Calcomp-936 plotter) by using the WINDOW program documented in MNT-11.
- 4.1.4 CALFORM will generate files FOR11.DAT, FOR12.DAT, FOR21.DAT for temporary data storage. These files may be deleted after each program run.
- 4.1.5 The program is run with the command .RU PLO:CALFOR and requires 32K core for successful execution.
- 4.1.6 Since the default plotting time limit for a batch job is 10 minutes, the user should specify the time limit required by means of the "/TPLOT:value" switch on the \$JOB card or .SUBMIT command.
- 4.1.7 Program capacity has been increased to 4000 points and 500 polygons each of up to 600 points.

Samples of CALFORM's plotter output may be viewed on the Computer Centre noticeboard in the stairwell to the basement of the Hawken Building.

## 5 SPSS-10 VERSION 5.02.2

A new version of SPSS has been implemented on NEW:. It is upward compatible with previous versions. Some of the new features are documented below, however, for more detailed information the user should give the command:

.PRINT HLP:SPSS.HLP

### 5.1 Running SPSS-10

- 5.1.1 SPSS-10 loads into 26K + 6K (32K) and can run during prime shift with a space of 1.5K. If more space is required for a particular run use the SPACE:n switch and run after 6 p.m. when 64K of core becomes available.

### 5.1.2 To run an SPSS program use:

```
.RUN NEW:SPSS
```

```
*destination=source, switches
```

The command line may be continued over several lines if necessary by terminating each continued line with a minus sign. A semi-colon may be used to proceed a comment on the last continuation of the command line. This may be useful for documentation purposes.

Source is the standard DECsystem-10 file specification

```
DEV:FILE.EXT[P,PN]<PROT>
```

(with inappropriate fields absent) of the location of the SPSS program.

```
DEV: defaults to DSK: ,
```

```
FILE does not default ,
```

```
.EXT defaults to .SPS ,
```

```
[P,PN] defaults to the user's project,programmer number
```

```
<PROTECTION> is inappropriate
```

Destination is a standard DECsystem-10 file specification to indicate where the listing of the SPSS run will be written.

```
DEV: defaults to DSK: ,
```

```
FILE defaults to source file name ,
```

```
.EXT defaults to .LST ,
```

```
[P,PN] defaults to the user's project,programmer number
```

```
<PROT> defaults to <057>
```

For a type-out of the switches, type the command:

```
.R NEW:SPSS
```

```
*/HELP or *TTY:=/HELP
```

## 5.2 The CONTROL CARDS

In SPSS-10 the general control-card has been made free-field. Control-cards are interpreted as follows:

If column 1 contains neither a blank nor a tab, then all columns from 1 up to a tab or up to two consecutive blanks or up to column 15 are considered the control field. The rest of the card is the specification field.

If the card begins with one or more blanks or tabs, then the card is a continuation card and all characters are part of a specification field. The specification field of a card may contain no more than 65 characters exclusive of leading blanks.

Any tab which is encountered in the specification field is replaced by a blank and the specification field is printed left justified. If the numbered option is specified then the numbering field must begin in column 73. That is -

(i) Previously punched control cards using columns 1-16 will still work in both modes.

(ii) Terminal users may type

Control field<tab>specification field	for command line
<tab> arguments	for continuation line

e.g. VARIABLE LIST<tab> A,B,C,D,  
<tab> E,F,G

### 5.3 Timesharing Features

In addition to free-field control card format, SPSS-10 provides other features which make timesharing usage more convenient. When the source device is TTY: SPSS-10 prompts the user with a right-angle bracket (>). A command or a procedural request with accompanying statistics and option cards may then be entered in free-field format. After the last continuation, typing an <alt> or <esc> will cause SPSS-10 to execute the request immediately. This avoids the necessity of typing ahead as is normally required by SPSS in order to verify that it has all the continuation cards. When the destination device is TTY: the default page size is NOEJECT. After the finish card is processed, SPSS-10 reinitializes itself and prompts with a '\*' for another command line. A control-Z at this point causes an exit. When both the source and destination devices are TTY: then the print back default becomes format (73), and errors are not necessarily fatal.

5.4 SPSS-10 now has a paper saving option which is the default, a much needed facility considering the volume of output SPSS produces and the current worldwide shortage of paper.

A Statistical Program Manual written at the Computer Centre, as well as the latest SPSS manual, will be released shortly and users will be notified in a later newsletter.

5.5     IMPORTANT:

On Monday, 24 MARCH, the version of SPSS on NEW: will be moved to STA:. The versions of SPSS on SYS: and NEW: will be deleted. Hence the only command which will run SPSS will be:

R   STA:SPSS

This will be the ONLY Computer Centre supported version of SPSS-10.

6       NO CONSULTING ON FRIDAY, 14 MARCH

On 14-15-16 March a technical workshop will be held at the Centre for Systems Programmers employed on PDP-10 installations throughout Australia.

As all professional staff will be involved with this workshop, it will not be possible to provide consulting service on Friday, 14 MARCH.

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